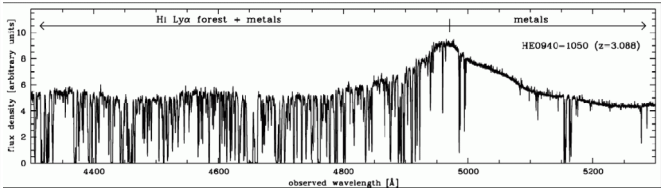
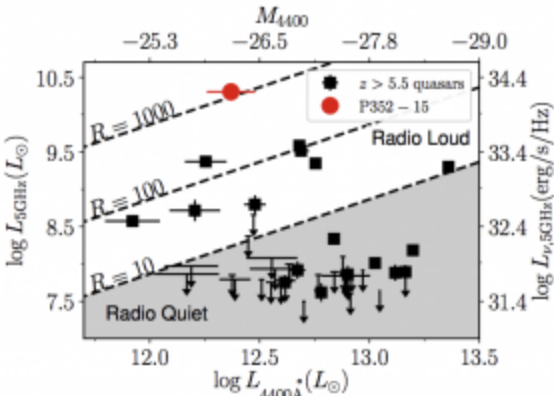


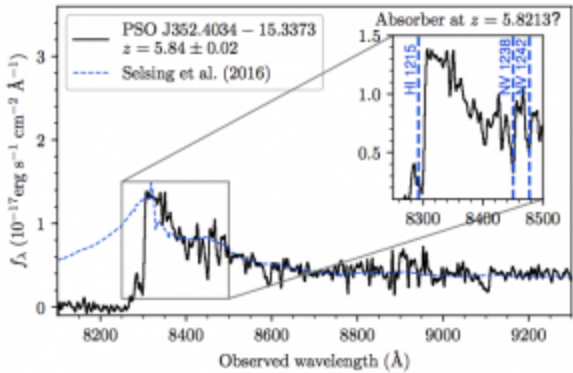
P352-15



Flux density of a quasar's emission across observed wavelengths. The rapidly varying peaks from ~4300 to 4900 Angstroms is known as the Lyman-alpha forest, where dips correspond to neutral hydrogen that has absorbed Lyman-alpha photons. Angstroms (Angle Strewn).



The relative log luminosities of quasars at 4,000 Angstroms to radio emissions at 5GHz. This shows that the quasar P352-15 is radio-brightest of all competing high-redshift quasars.



Flux density measurement over observed wavelengths of the quasar PSO J352.4034-15.3373. A sharp drop-off at a wavelength of ~8300 Angstroms indicates that between us and the quasar is a very dense lyman alpha absorbing environment.

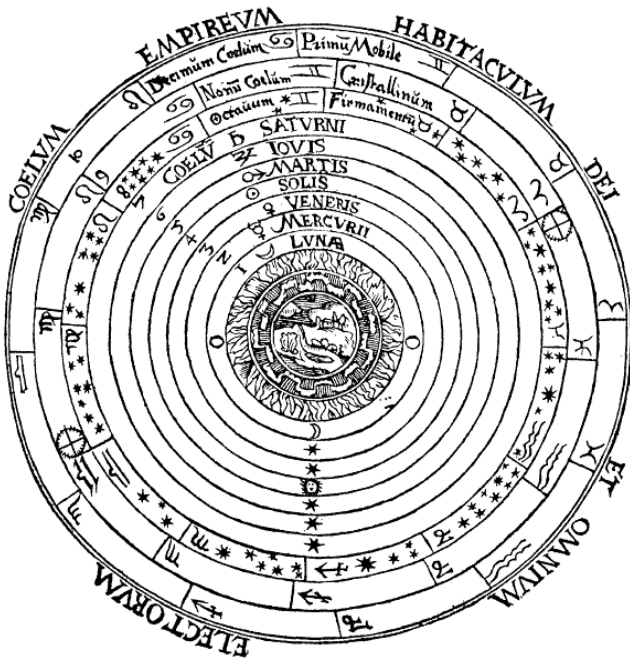
aasnova.org/2018/08/28/a-radio-bright-quasar-at-the-edge

HELIOCENTRISM LUNAR ECLIPSE AND GRAVITOMAGNETISM

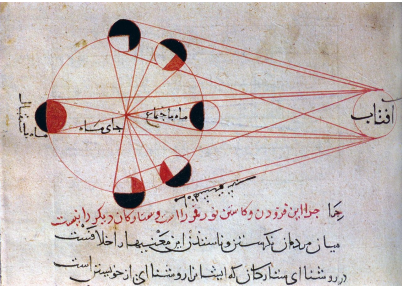
The Equinox aligns the Earth's magnetic pole parallel with the sun's axis to rotation. The distance from the sun in the fall is 149.6 M km to 147.1 M km, in autumn, AU = 149.6 million (M) km, from the Sun. Summer (June) solstice the Earth is then near aphelion = 152.1 M km. Earth swings to within 91,399,451 miles (147,093,158 km) of the sun Jan 1st perihelion.

	Summer Solstice	Winter Solstice	Vernal Equinox	Autumn Equinox	
Europe	06/20	12/ 21	09/22	03/20	12 Hours and Six and One Half Minutes
Australia	12/ 21	06/20	03/20	09/22	

Schema huius præiffæ diuifionis Sphæra Rum.



Heliocentrism learning illustration, that bridges electromagnetic fields, planetary sciences, gravitomagnetism.



Kitab al-Tafhim

Indiologist Al-Biruni's astronomical work explains the different phases of the Moon with respect to the position of the Sun. Other works are titles the following

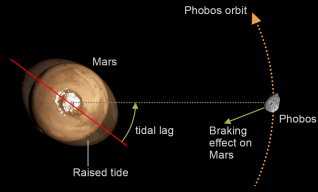
Tahqīq mā li-l-Hind min maqūlah maqbūlah fi al-‘aql aw mardhūlah" Verifying All That the Indians Recount, the Reasonable and the Unreasonable" or "The book confirming what pertains to India, whether rational or despicable"

Expanding Planets : Small Rocks to Gas Giants : m = E/c^2

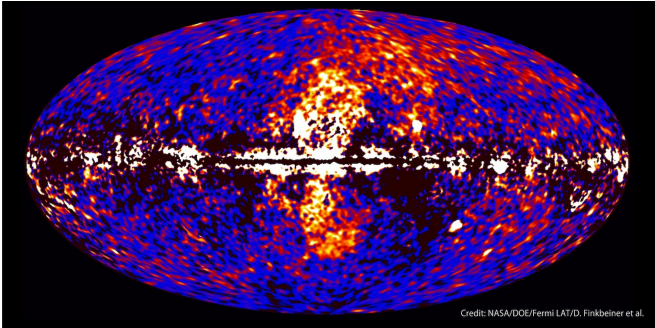
Clouds cover venus and it expands from the inside enough to layer the surface with what some have explained as perpetual eruptions. Could Venus be a proto Saturn?

TIDAL FRICTION AND CORE HEATING (ABLATION)

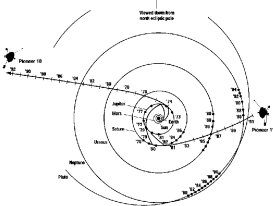
Fairies and Ferre, the ancients who babbled thier way into an iron core earth. And it probably is! Only a Plasma core, rather than a solid. The moons orbiting planets bends the magnetic field flat. Optical illusions can be seen from the surface to the Earth to our own moon, as a magnifying glass enlarging effect known as gravitational lensing occurs. "Palaeomagnetic field intensity variations suggest Mesoproterozoic inner-core nucleation" they say! When you rub two metal rods together, they magnetize, and the same can be true as molten lava cools into rock preserving the geomagnetic field. The entire record to the geomagnetic sphere is in there, when you look through enough samples. seis-insight.eu/en/public-2/martian-science/phobos-tides Geophysics at SNOLAB help determine why the earth is hot by measuring geo-neutrinos. Another studies the propagation of earthquakes. snolab.ca/science ablation (n) early 15c. "a taking away," auferre "to carry away," from ab "off, away from" (see ab-) + the irregular verb ferre see oblate (n) "to bear, carry." etymonline.com/search?q=auferre



"Two years ago we slowed [Light Speed] down to 38 miles an hour; now we've been able to park it then bring it back up to full speed." 2001 - news.harvard.edu tinyurl.com/yb6r3s76

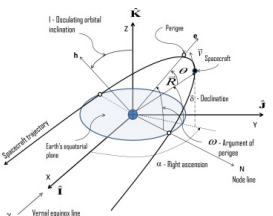


Fermi Reveals Giant Gamma Ray Bubbles 8/10/2018



The Pioneer Anomaly

Approaching the outer limits to the solar sphere, radio signals sent from the pioneer are slowed. Physics exiting the bow shock perpendicular and parallel to the Sun's orbit could affect material's resistance through an ion accelerating toroidal energy field. old.inspirehep.net/record/843164/plots



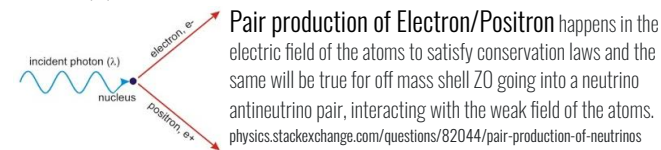
The Flyby Anomalies

Time dilation results when a signal expected to return is late or early. Spacecraft nearing the Tropic Geomagnetic auras lines, Cancer and Capricorn experience this dilation. sciencedirect.com : tinyurl.com/yanvn9h7



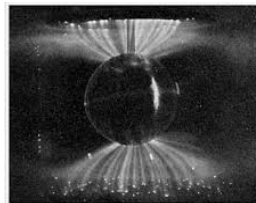
# Pair Production, Fermions and Bosons

An indian scientist at the patent office handed in a paper explaining condensation. Einstein knew it was so important, he put his name on it so that his fame bolstered the work into memory rather than paper stacks obscurity.



## Magnetic Ropes Connecting Saturn to Sun

Plasma perpendicular to a magnetic field known as Birkland currents connect the sun to Earth, Venus, and now Saturn. These magnetic "flux" ropes twist around each other. These twisted helically structured magnetic fields are called flux ropes or "flux transfer events" (FTEs) and are observed at Earth and even more commonly at Mercury. These currents could be pulling solar wind and it's materials directly into these planets' atmosphere, where they are either captured, or blown away.



Auroral - like Birkeland current created by scientist Kristian Birkeland in his terrella, featuring a magnetised anode globe in an evacuated chamber.



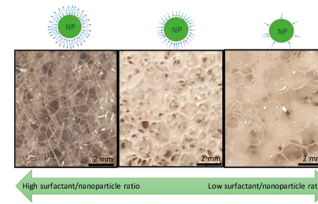
[nasa.gov/feature/jpl/curiosity-detects-unusually-high-methane-levels/](https://nasa.gov/feature/jpl/curiosity-detects-unusually-high-methane-levels/)

## Extremophile Bacterias that Survive Space Travel

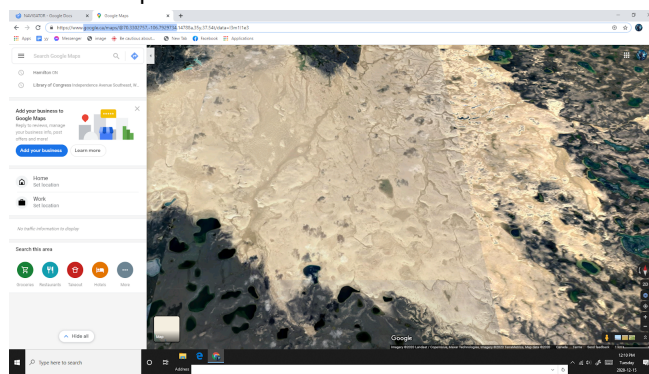
International Space Station experiments, published in In Frontiers in Microbiology, show that the bacteria Deinococcus radiodurans can survive at least three years in space. [smithsonianmag.com/science-nature/scientists-discover-exposed-bacteria-can-survive-space-years-180975660/](https://smithsonianmag.com/science-nature/scientists-discover-exposed-bacteria-can-survive-space-years-180975660/)

Insight on Methane Foam Stability and Texture via Adsorption of Surfactants on Oppositely Charged Nanoparticles (Wastewater Terraforming?) Phase behavior on alumina-coated silica nanoparticles dispersion in anionic surfactant (sodium fatty alcohol polyoxyethylene ether sulfate) presence. Surfactant/nanoparticle concentration ratio on methane foam stability as a potential fluid for enhanced oil recovery.

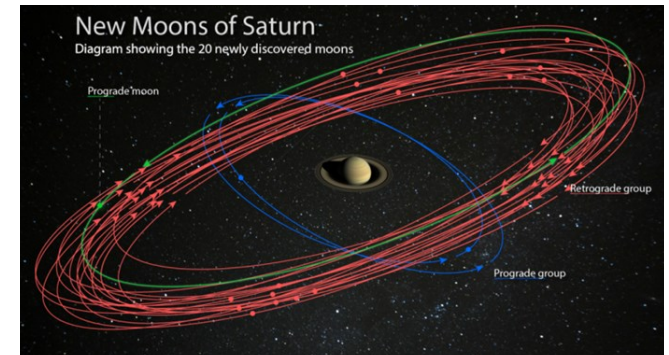
[pubs.acs.org/doi/10.1021/acs.langmuir.8b01966](https://pubs.acs.org/doi/10.1021/acs.langmuir.8b01966)



## Nunatsiq Foam Reservoir @70.33,-106.79 2020-12-15



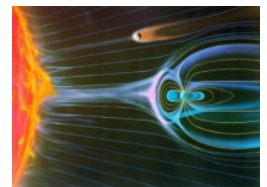
These things come and go all the time. Could it be the Methane on Mars / Seasonal?



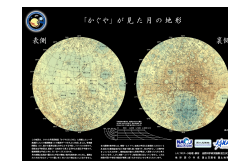
**SATURN'S 20 NEW MOONS BRINGS TOTAL TO 82**  
[carnegiescience.edu/news/saturn-surpasses-jupiter-after-discovery-20-new-moons-and-you-can-help-name-them](https://carnegiescience.edu/news/saturn-surpasses-jupiter-after-discovery-20-new-moons-and-you-can-help-name-them)

## Universal Solar Class Systems

[sci.esa.int : tinyurl.com/ya9ppc9u](https://sci.esa.int/tinyurl.com/ya9ppc9u) Birkeland currents connect the sun to the plants. Twisting magnetic fields that accelerate solar winds into orbit around planets. About 8% by mass of the solar wind is He, the vast majority of the rest is H about 1/40000 of that He is He3. Since Venus has an induced and no intrinsic magnetic field to act as a shield against incoming charged particles. The ASPERA-4 mission investigates solar wind interactions with the upper atmosphere.



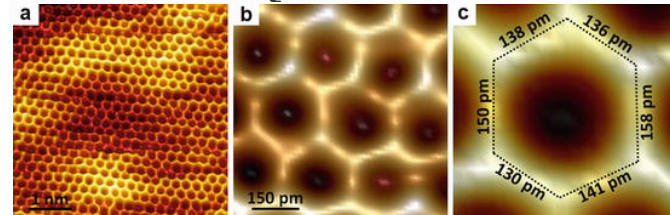
**PRINCIPLES OF HELIOPHYSICS**  
the universal processes behind planetary habitability.  
**FREE TEXTBOOK**  
[arxiv.org/pdf/1910.14022.pdf](https://arxiv.org/pdf/1910.14022.pdf)



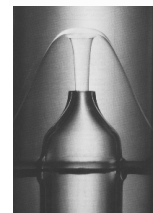
## Jaxa's Moon Photos on the Dark Side

During the cold war, there were two or more space agencies. Now there are hundreds, both privately funded and government. [global.jaxa.jp](https://global.jaxa.jp)

## DIABOLIC QUANTUM SIGNALS



Scanning tunneling microscopy (STM) is one of the basic techniques for the analysis of surface reconstructions, overlayer growth mechanisms, surface dynamics, and chemistry at the atomic scale. STM is used in physics, chemistry, and biology for high resolution studies of organic and inorganic nanoobjects. [link.springer.com/chapter/10.1007/978-3-662-44551-8\\_15](https://link.springer.com/chapter/10.1007/978-3-662-44551-8_15)



(classical superfluid helium)

## Superfluidity and Bose Excitations in He<sup>3</sup> films

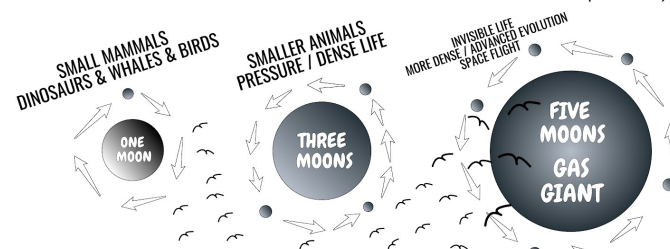
[jetp.ac.ru/cgi-bin/dn/e\\_053\\_04\\_0804.pdf](https://jetp.ac.ru/cgi-bin/dn/e_053_04_0804.pdf)

## COULD FOAM STOP EARTHQUAKES?

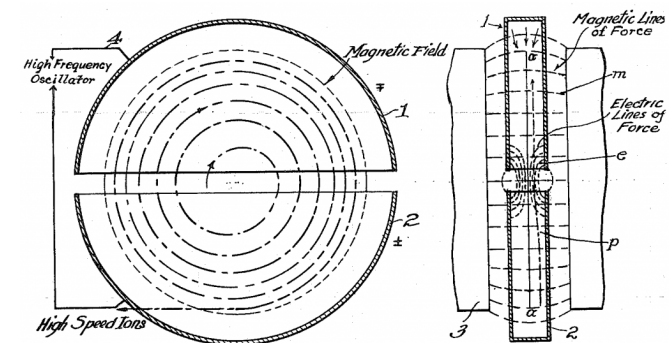
Most induced earthquakes are not directly caused by hydraulic fracturing (fracking). The recent increase in earthquakes in the central United States is primarily caused by disposal of waste fluids that are a byproduct of oil production. [usgs.gov/faqs/does-fracking-cause-earthquakes](https://usgs.gov/faqs/does-fracking-cause-earthquakes)



(classical superfluid helium)



PLANETS EVOLVE PREDICTABLY AND SO DOES LIFE



**Ernest Orlando Lawrence Ciclotrón**  
**EXPLORING CANADA'S PHYSICS LABS**

[blog.scienceborealis.ca/virtual-road-trip-exploring-canadas-major-physics-labs/](https://blog.scienceborealis.ca/virtual-road-trip-exploring-canadas-major-physics-labs/)